

A faint, light gray background image of the Vitruvian Man, a famous drawing by Leonardo da Vinci. The figure is inscribed within a circle and a square, with arms and legs extended. The image is centered and serves as a backdrop for the text.

# BCT ATHLETIC SHOE TEST

# PURPOSE

- To determine the durability, comfort, and performance of different types of athletic shoes after nine weeks of Basic Combat Training.

# CURRENT PROCEDURES AT FORT JACKSON

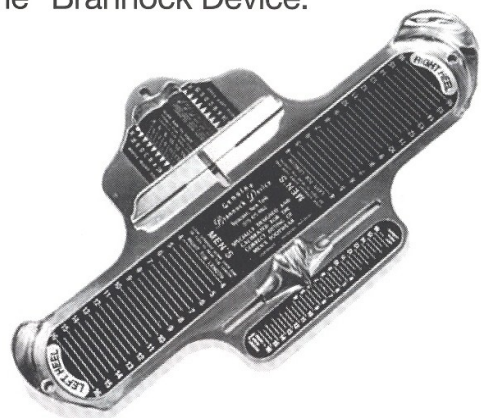
- New Warriors in the Reception Station are measured for foot length and width.
- They are also screened for arch type.

# ARCH DETERMINATION

- Trained observers have the new Warriors stand on a Plexiglas-topped box.
- A mirror on the bottom of the box reflects an imprint of the foot for arch determination.

# What is my shoe size?

The first step to proper fitting is to measure both feet. Your footwear sales associate will measure both feet using the "Brannock Device."



Some other buying tips to ensure proper fit are:

- Wear the socks you will run in when trying on shoes.
- Walk and run in the shoe on a hard surface while trying them on.
- Buy shoes after being on your feet for a few hours.
- Make sure the shoes are comfortable when you buy them.

## SHOE SIZE

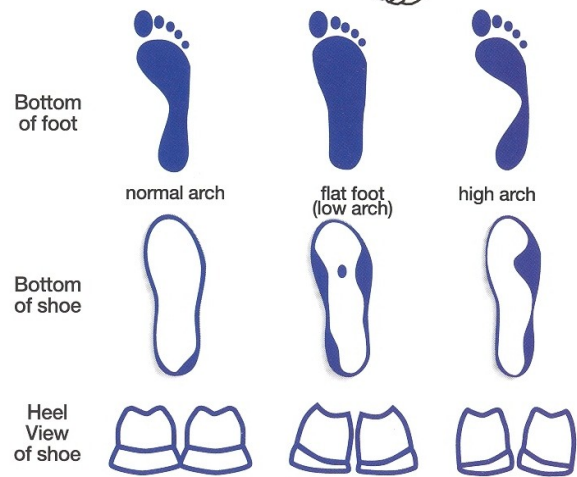
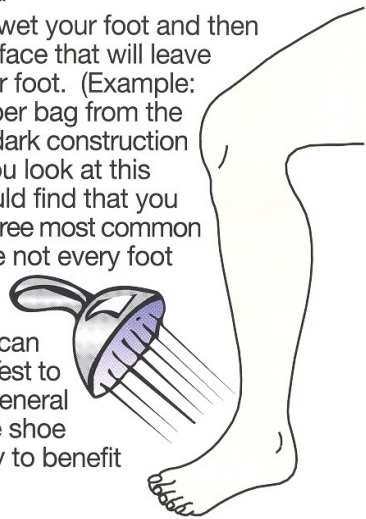
Right Foot: \_\_\_\_\_  
Left Foot: \_\_\_\_\_  
Width: \_\_\_\_\_

# "Wet Test" - What is my foot type?

Second, you can take the simple Wet Test to determine what kind of foot type you have and what shoe shape you should look for. Basically, running shoes have one of three different shapes:

- Straight
- Semi-curved
- Curved

To take the test, wet your foot and then stand on any surface that will leave an imprint of your foot. (Example: Use a brown paper bag from the grocery store or dark construction paper). When you look at this imprint, you should find that you have one of the three most common foot types. While not every foot completely mimics these three types, you can still use the Wet Test to determine your general foot type and the shoe shape most likely to benefit your running.



# Selecting the proper running footwear

## The Normal Foot

**Foot characteristics:** A normal foot lands on the outside of the heel, then rolls inward (pronates) slightly to absorb shock. Runners with a normal foot and normal weight are usually considered biomechanically efficient and don't require motion-control shoes.



**Best Fit:** Semi-curved shape

**Best Shoes:** Stability shoes with moderate control features such as a two-density midsole.

## The Flat Foot

**Foot characteristics:** This imprint usually indicates an over-pronated foot that strikes on the outside of the heel and rolls inward (pronates) excessively. Over time, this can cause many different kinds of overuse injuries.



**Best Fit:** Straight or semi-curved shape

**Best Shoes:** Motion-control shoes or stability shoes with firm midsoles and control features that reduce the degree of pronation. Stay away from highly cushioned curved shoes that lack stability and control.

## The High-Arched Foot

**Foot characteristics:** A curved, high-arched foot is generally termed an under-pronated foot. This type of foot doesn't pronate enough, so it's not an effective shock absorber.



**Best Fit:** Curved shape

**Best Shoes:** Cushioned shoes with plenty of flexibility to encourage foot motion and plenty of mid-foot cushioning. Stay away from motion-control or stability shoes that reduce foot mobility.

# FM 21-20

## APP. E



### FOOT AND SHOE TYPES

## HOW TO SELECT THE RIGHT SHOE

### Rigid Foot

Foot tends to stay rigid and does not conform to the ground.



#### Typical Injuries

Impact Injuries  
Shin Splints  
Stress Fractures  
Knee Pain  
Hip Pain  
Heel Pain  
Ankle Sprains

#### Select a Shoe with these Features

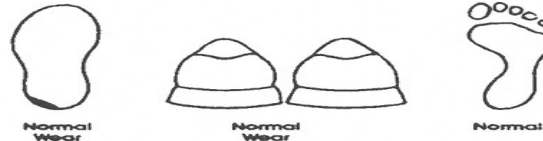
- Maximum Shock Absorption and Cushioning
- Dual Density Midsole with the Firmer, Denser Portion on the Outer Edge
- Curved Last
- Flexible Sole
- Elevated Heel
- Avoid Flared Heel

#### Impact Control Shoe



### Normal Foot

Foot tends to conform to the ground without excess motion.



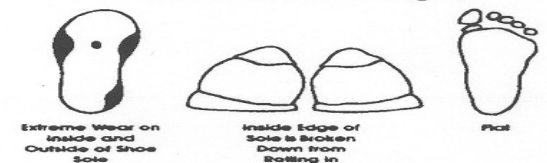
#### Select a Shoe with these Features

- Balance of Motion Control and Cushioning
- Flexible Sole
- Durable Outsole Appropriate for the Running Surface

**Use this chart to determine the special fit needs you have — then check our selection of shoes.**

### Floppy Foot

Foot rolls in excessively toward the midline of the body as it bears weight.



#### Typical Injuries

Instability Injuries  
Arch Pain  
Heel Cord Pain  
Shin Pain  
Knee Pain (knee cap or inside of knee)

#### Select a Shoe with these Features

- Dual Density Midsole with the Firmer, Denser Area on the Inside
- External Heel Counter
- Good Arch Support
- Maximum Support
- Straight last

#### Motion Control Shoe



Figure E-1

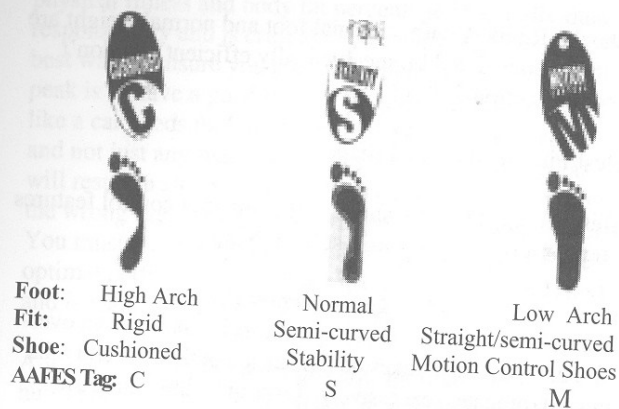


# IET SOLDIER'S MANUAL

## Selecting the Proper Running Footwear

**Determining Shoe Size.** The first step to proper fitting is to measure both feet. Your footwear sales associate will measure both feet using the “Brannock Device.” Wear the socks you will run in when trying on running shoes. Walk and run in the shoe on a hard surface while trying them on. Buy shoes after being on your feet for a few hours. Make sure the shoes are comfortable when you buy them.

**“Wet Test—What is my foot type?”** Second, you can take the simple Wet Test to determine what kind of foot type you have and what shoe-shape you should look for. Basically, running shoes have one of three different shapes: straight; semi-curved; or curved. To take the test, wet your foot and then stand on any surface that will leave an imprint of your foot. (Example: Use a brown paper bag from the grocery store or dark construction paper). When you look at this imprint, you should find that you have one of the three most common foot types. While not every foot completely mimics these three types, you can still use the Wet Test to determine your general foot type and the shoe shape most likely to benefit your running.



**Figure 4-31. Example Foot Type Selection.**

**NOTE:** Circle the foot type that matches your foot assessment results.

### The High-Arched Foot

**Foot Characteristics:** A curved, high-arched foot is generally termed an under-pronated foot. This type of foot doesn't pronate enough so it's not an effective shock absorber.

**Best Fit:** Curved shape

**Best Shoes:** Cushioned (“C” tag) shoes with plenty of flexibility to encourage foot motion and plenty of mid-foot cushioning. Stay away from motion-control or stability shoes that reduce foot-mobility.

### The Normal Foot.

**Foot Characteristics:** A normal foot lands on the outside of the heel, then rolls inward (pronates) slightly to absorb

# ARCH TYPE AND TYPE OF SHOE

- NORMAL ARCH
  - SEMI-CURVED SHAPE
  - STABILITY SHOES WITH MODERATE CONTROL FEATURES
  - AAFES “S” TAG



# HIGH ARCH

- CURVED SHAPE
- CUSHIONING WITH PLENTY OF FLEXIBILITY; STAY AWAY FROM MOTION CONTROL OR STABILITY SHOES
- AAFES “C” TAG

# LOW ARCH

- STRAIGHT OR SEMI-CURVED SHAPE
- MOTION CONTROL OR STABILITY WITH FIRM MIDSOLES
- AAFES “M’ TAG

# SHOE CONSTRUCTION

- UPPERS

- Holds the outsole to the foot.
- With the lacing system, midsole, and heel counter, adds stability and motion control.

# MIDSOLE

- SHOE'S CUSHIONING SYSTEM
- PROVIDES SOME ENERGY RETURN
- ADDITIONAL STABILITY AND MOTION CONTROL THROUGH DEVICES ON THE MEDIAL SIDE FOR OVERPRONATORS

# OUTSOLES

- PROVIDES TRACTION AND HELPS REDUCE WEAR ON MIDSOLE
- MANY DIFFERENT TYPES OF TREAD, GROOVES, AND SUPPORT DEVICES

# NEW INNOVATIONS

- SPRING MIDSOLES
- GEL TUBED MIDSOLES
- SUPPORT COLUMNS
- THREE COMPRESSION HEEL PADS
- INSERTS FOR ALL TYPES OF SHOES

# STANDARDIZED PHYSICAL TRAINING IN BCT

- Less Running
- More movement activities,  
including lateral movements.



# NEED FOR A NEW SHOE?

- More time in athletic shoe
- Anecdotal evidence of durability problems

# THE TEST

- Randomized shoe distribution, using current running shoes as a control
- Compare with cross training shoes
- 9 week BCT
- Pedometers to measure the number of daily steps

# MEASUREMENTS

- DURABILITY OF THE UPPERS
- THREE POINT SCALE,  
NOTICEABLE TEARING, HOLES,  
OR SEPARATION OF UPPER  
FROM OUTSOLE

# MEASUREMENTS

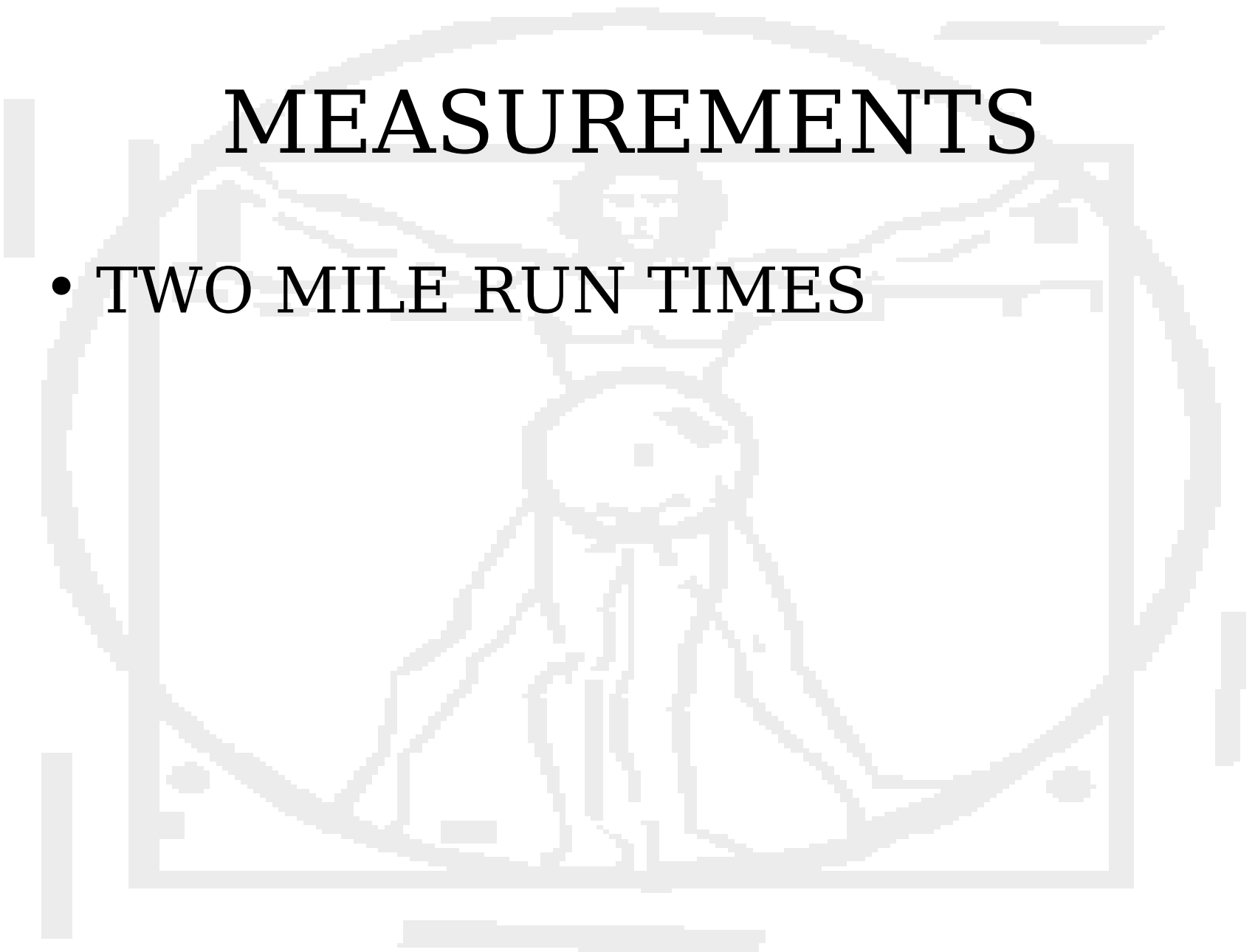
- MIDSOLE COMPRESSION
- HEEL VARIANCE

# MEASUREMENTS

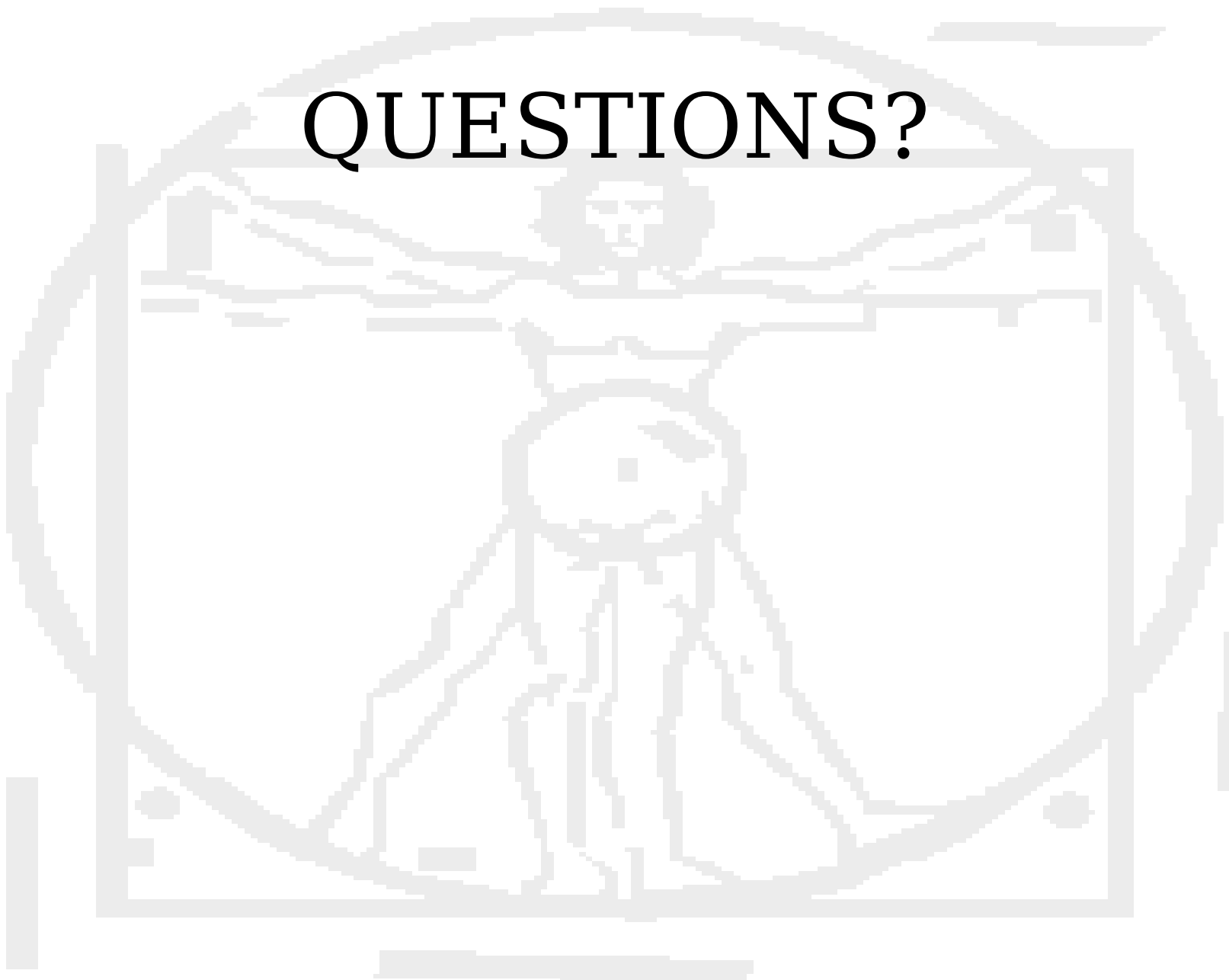
- PERCEIVED COMFORT INDEX
  - WHILE STANDING
  - WHILE WALKING
  - WHILE RUNNING

# MEASUREMENTS

- TWO MILE RUN TIMES

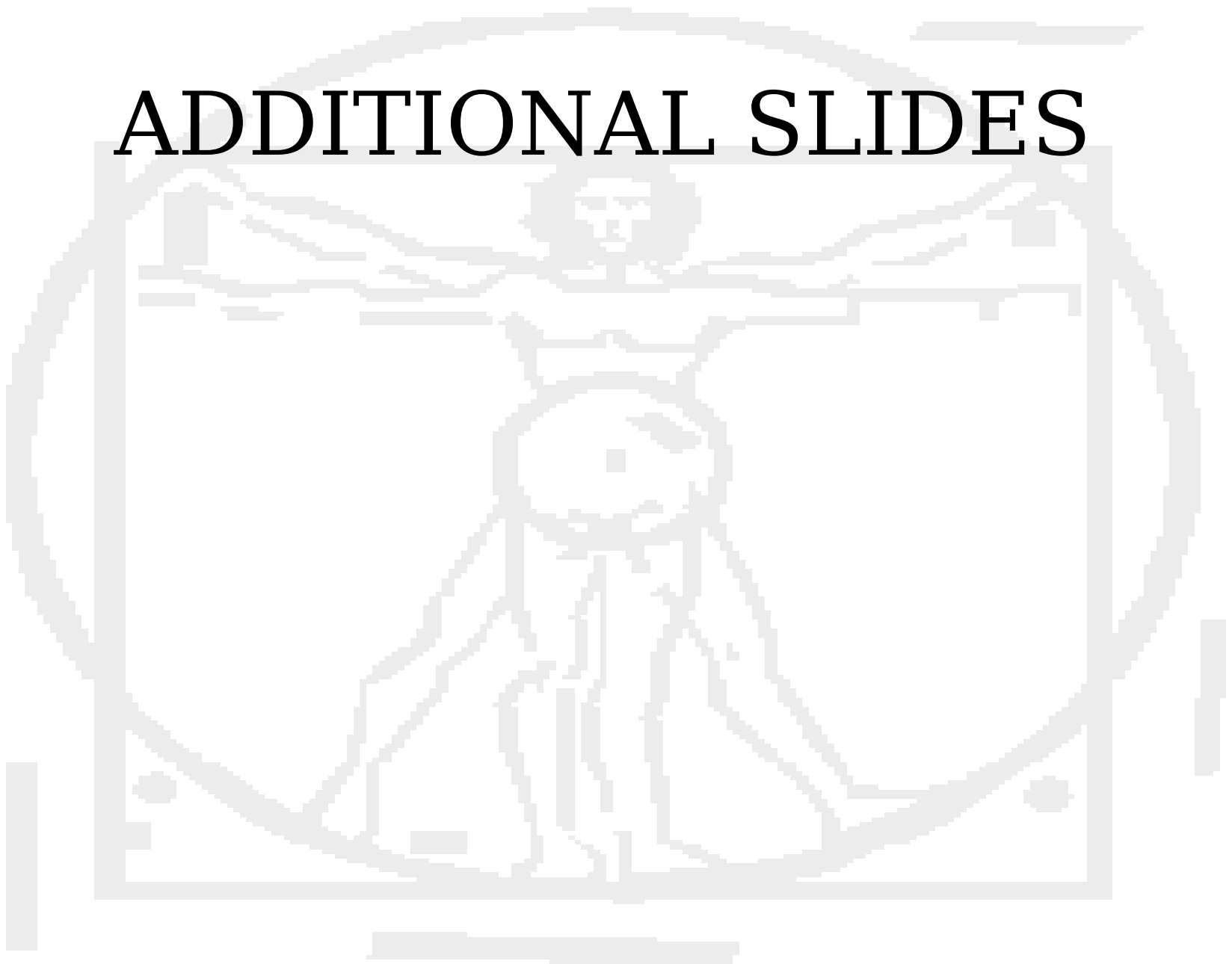


QUESTIONS?





# ADDITIONAL SLIDES



# TIMELINE

